Track 1 Decision Documentation Package

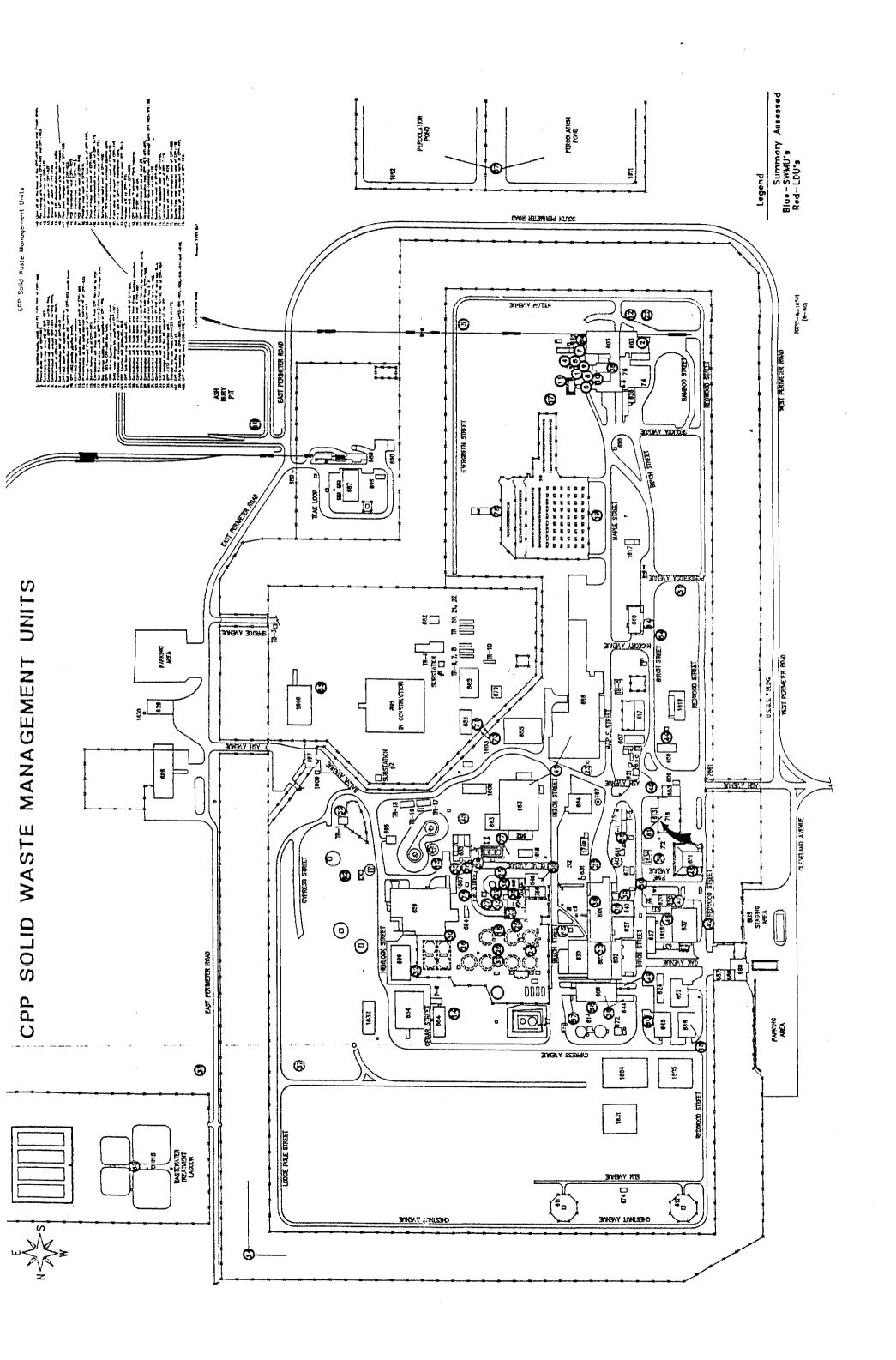
Waste Area Group 3 Operable Unit 3-01

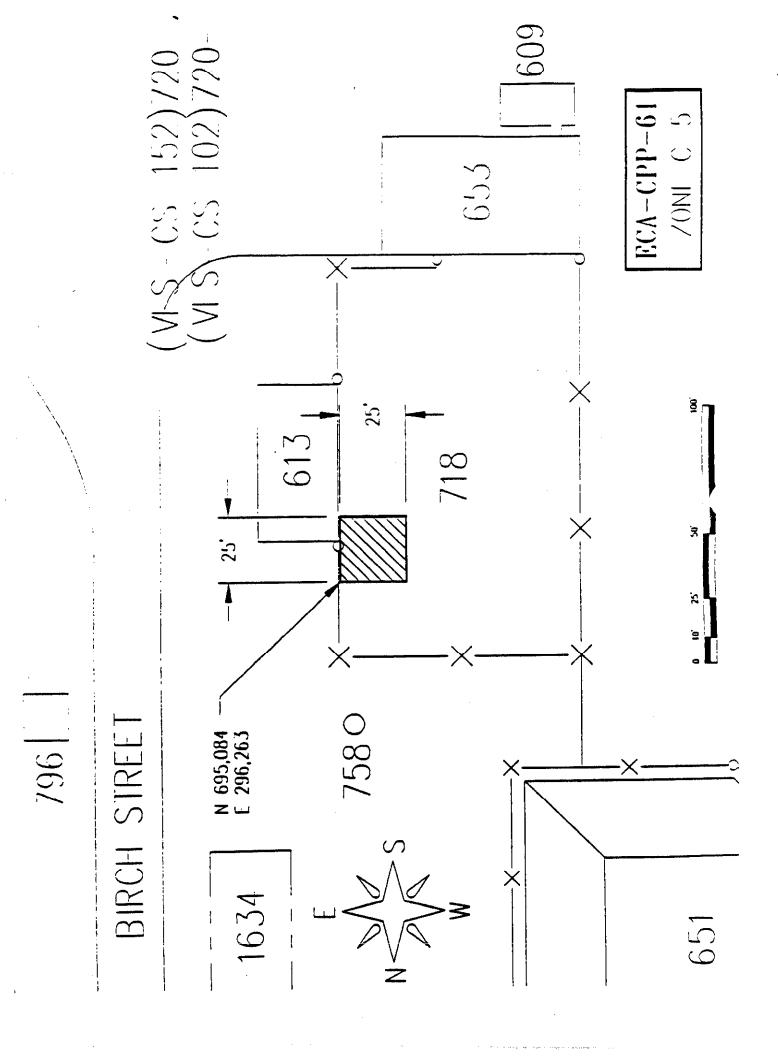
Site CPP-61

PCB Spill in CPP-718 Transformer Yard









DECISION DOCUMENTATION PACKAGE COVER SHEET

PREPARED IN ACCORDANCE WITH

TRACK 1 SITES:
GUIDANCE FOR ASSESSING
LOW PROBABILITY HAZARD SITES
AT INEL

SITE DESCRIPTION: PCB SPILL IN THE CPP-718 TRANSFORMER YARD

SITE ID: CPP-61

OPERABLE UNIT: 3-01

WASTE AREA GROUP: 3

I. SUMMARY - PHYSICAL DESCRIPTION OF THE SITE: CPP-61 is a 25 ft. by 25 ft. area within the CPP-718 transformer yard that is the site of a PCB oil spill during the approximate time frame between Spring 1982 and July 1985. The transformer yard is approximately 95 ft. by 155 ft. in area and is surrounded by a 8 ft. tall cyclone fence. The spill occurred during the Utilities Replacement and Expansion Project (UREP) when the transformer had to operate with a 30-40% voltage overload. As a result of the voltage overload, heat expansion of the transformer oil caused a leak to occur in one of the transformer fittings. According to the existing documentation, the leak was estimated to total 400 gallons at a PCB concentration of 179 ppm; some of which was not contained and contaminated soil adjacent to the pad.

In July 1985 a cleanup of the area was initiated that is not well documented. Existing documentation consists of PCB and radiological data (collected as the PCB contaminated soil was excavated), sampling maps (not-to-scale), and hand written notes that document the clean-up effort. Excavation is reported to have been completed to a depth of 6 ft and the excavation was subsequently backfilled with soil previously removed from portions of the CPP-718 transformer yard. Analysis of the backfill soil showed PCB concentrations up to 10 ppm. Additionally, documentation and analytical results suggest that an area of residual surface contamination remains adjacent to the excavated area. Results for a sample collected from that location indicated a PCB concentration of 31 ppm.

- I. SUMMARY QUALITATIVE ASSESSMENT OF RISK: The qualitative risk of the site is predicted by the risk assessment to be medium. The reliability of the data is medium to high. Soil backfilled to the excavation may have contained PCB concentrations of up to 10 ppm.
- III. SUMMARY CONSEQUENCES OF ERROR: Limited risk due to low PCB concentrations being left in the soil may result due to the no further action recommendation.
- IV. SUMMARY OTHER DECISION DRIVERS: The clean-up requirements provided for in the Toxic Substances Control Act (TSCA) 40 CFR 761.125 require remediation of PCBs in Industrial Areas to 25 ppm PCBs by weight in soil. The guidance provided in OWSER Directive 9335.4-01 "Guidance for Remedial Actions at Superfund Sites with PCB Contamination" also requires clean-up at restricted access industrial areas of 25 ppm PCBs by weight in soil. This clean-up requirement is based on health risk assessment criteria using occupational exposure of site workers by soil ingestion and dermal contact as the exposure scenario. Provided the established criteria in TSCA are considered an ARAR for the INEL, the existing soil concentrations can be left in place and no further action is recommended for this site. This ARAR, together with the very conservative assumptions used in performing the Track I risk assessment, ovides for a reasonable foundation for recommending no further action at this ite.

RECOMMENDED ACTION: No Further Action.

Signatures	# PAGES:		DATE:
Prepared By:		DOE WAG Manager:	
Approved By:		Independent Review:	

DECISION STATEMENT (BY DOE RPM)

page 3

DATE RECD: 4/17/92

DISPOSITION:

Residual contamentain array 210 pm,

Our exercises to 6" of backfilling with

Clean soil, rad contamination wint

will be disit with as nontine man train

action at CPP structure or furthe

action required at this time. ROD

will address this wint!

DATE: 4/17/97

PAGES (DECISION STATEMENT):

NAME: JUANY Lycor

SIGNATURE:

DATE RECD: 4/9/92

DISPOSITION:

How gal leak from x fue @ 179 ppm, Excavation of Spill area to 6 & wackfilled. Residual contamenter to 431 ppm. Estimate 3.7 195 PCB remaining @ source.

The regidual contamenta and a 10 ppm. gamples to lab not rad. ettagh rad contament in area of spill noted. The PCB source contamenation is within cleanup criteria for PCBs and no further investigation of the PCB source appears needed. The wAG-wide RI will need to address rad contamenation, however.

DATE: 4/16/92 # PAGES (DECISION STATEMENT):

NAME: Wayne Pierrs SIGNATURE: Mayor Fierrs

SIGNATURE:

PROCESS/WASTE WORKSHEET SITE ID <u>CPP-61</u>

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Col 1 Processes Associated with this Site	Col 2 Waste Description & Handling Procedures	Col 3 Description & Location of any Artifacts/Structures/Disposal Areas Associated with this Waste or Process
Process PCB Transformer Leak	PCB Transformer Leaked an Estimated 400 Gallons of Oil to the Soil	Artifact: Concrete Pad Location: CPP-61 Description: Transformer Pad Contaminated with PCBs Artifact:Soil Surrounding the Concrete Pad Location: CPP-61 Description: Soil Contaminated with PCBs Artifact Location Description
Process		Artifact Location Description Artifact Location Description Artifact Location Description
Process		Artifact Location Description Artifact Location Description Artifact Location Description Description

CONTAMINANT WORKSHEET SITE ID CPP-61 PROCESS (Col 1) PCB Transformer Spil	<u>1</u> W	ASTE (COL 2) <u>P</u> (CBs		page 7
Col 4 What known/potential hazardous substances/constituents are associated with this waste or process?	Col 5 Potential sources associated with this hazardous material	Col 6 Known/estimated concentration of hazardous substances/ constituents	Col 7 Risk based concentration mg/kg	Col 8 Qualitative risk assessment (Hi/Med/Lo)	Col 9 Overall reliability (Hi/Med/Lo)
PCBs	Soil	<10 ppm	0.08 ppm	Med	Med
e Book Control					

a. ND = not detected DL = detection limit in ppm

	QUALITATIVE RISK AND	RELIABILITY EVALUATION	TABLE
		QUALITATIVE RISK	
	Low	Medium	High
HIGHLY UN- Reliable	screening data	TRACK II *	screening data
HIGHLY Reliable	No Action Required	RI/FS	Interim Action
reliability	LOW concentration resulting in risk < 10 ⁴	MEDIUM	HIGH ncentration resulting in risk > 10 ⁻⁴
		qualitative risk	

[•] if there exist sufficient data to identify an appropriate remedy

IF SO, DESCRIBE THE CONFIRMATION.

[]

[]

[]

(X) 3,4,8,9

No available information []

Engineering/site drawings []

Unusual Occurrence Report []

Historical process data Current process data

Areal photographs

Summary documents

Facility SOPs

OTHER

Anecdotal

The dates of the spill are documented in the PCB clean-up report.

Block 4 SOURCES OF INFORMATION (check appropriate box/es & source number from reference list)

Analytical data

Construction data

Q.A. data

D&D report Initial assessment

Well data

Documentation about data []

Disposal data

Safety analysis report

[]

[]

[]

[]

[]

[]

Question 1. What are the waste generation process locations and dates of operation associated with this site?
Block 1 Answer: CPP-61 is a 25 ft. by 25 ft. area within the CPP-718 transformer yard that is the site of a PCB oil spill during the approximate time frame between Spring 1982 and July 1985. The transformer yard is approximately 95 ft. by 155 ft. in area and is surrounded by a 8 ft. tall cyclone fence. The transformer yard is still currently in operation and has operated since the early 1950s.
The spill occurred during the Utilities Replacement and Expansion Project (UREP) when the transformer had to operate with a 30-40% voltage overload. As a result of the voltage overload, heat expansion of the transformer oil caused a leak to occur in one of the transformer fittings. According to the existing documentation, the leak was estimated to total 400 gallons at a PCB concentration of 179 ppm; some of which was not contained and contaminated soil adjacent to the pad.
In July 1985 a cleanup of the area was initiated that is not well documented. Existing documentation consists of PCB and radiological data, sampling maps, and hand written notes that document the clean-up effort. Excavation is reported to have been completed to a depth of 6 ft. and the excavation was backfilled with soil containing up to 10 ppm PCB contaminated soil.
How reliable is/are the information source/s?High _X_MedLow (check one) EXPLAIN THE REASONING BEHIND THIS EVALUATION. The dates of the spill are documented in the PCB clean-up report.
Has this INFORMATION been confirmed? X Yes No (check one)

Question	2.	What	are	the	disposa	process	locations	and	dates	of	operation
•					ith this						

Block 1 Answer: CPP-61 is a 25 ft. by 25 ft. area within the CPP-718 transformer yard that is the site of a PCB oil spill during the approximate time frame between Spring 1982 and July 1985. The transformer yard is approximately 95 ft. by 155 ft. in area and is surrounded by a 8 ft. tall cyclone fence. The transformer yard is still currently in operation and has operated since the early 1950s.

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Block 2 How reliable is/are the information so EXPLAIN THE REASONING BEHIND THIS EV	
The spill is documented in several of the r	eferences.
Has this INFORMATION been confirmed? IF SO, DESCRIBE THE CONFIRMATION. The spill is documented in several of the r	
No available information [] Anecdotal [] Historical process data [] Areal photographs [] Engineering/site drawings [] Unusual Occurrence Report [] Summary documents [] Facility SOPS [] OTHER [X] 3,4,8,9	Analytical data [] Documentation about data [] Disposal data [] Q.A. data [] Safety analysis report [] Initial assessment [] Well data [] Construction data []

Question 3. Is there empirical, circumstantial, or other evidence of migration? If so, what is it?
Block 1 Answer: There is no evidence of migration from the site.
How reliable is/are the information source/s? X HighMedLOW (check one) EXPLAIN THE REASONING BEHIND THIS EVALUATION. The reports document that the spill was restricted to the site .
Has this INFORMATION been confirmed? X Yes No (check one) If so, DESCRIBE THE CONFIRMATION. The reports document that the spill was restricted to the site.
No available information []

Question 4. Is there evidence that a source ex the sources and describe the evide	cists at this site? If so, list ence.
Block 1 Answer:	
The PCB transformers have been removed a release of PCBs. The soil on the site ca source of PCBs.	and are no longer sources for contains PCBs and can be considered
	•
How reliable is/are the information source EXPLAIN THE REASONING BEHIND THIS EVAL	
The reports document the removal of the transf the soil.	formers and the residual PCBs in
Has this INFORMATION been confirmed? X IF SO, DESCRIBE THE CONFIRMATION.	YesNo (check one)
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Block 4 SOURCES OF INFORMATION (check appropriate	te box/es & source number from reference list)
No available information [] Anecdotal [] Historical process data [] Current process data [] Areal photographs [] Engineering/site drawings [] Unusual Occurrence Report [] Summary documents []	Analytical data []

Question 5. Does site operating or disposal hestimation of the pattern of poter pattern is expected to be a scattern expected minimum size of a signif	ential contamination? If the cering of hot spots, what is the
Block 1 Answer:	
The pattern of PCB distribution in the the area of the immediate spill. Diffe expected in the backfill versus the nat	erences in concentration can be
	· •
EXPLAIN THE REASONING BEHIND THIS EVA	
The reports document the contamination in the	e soil.
Has this INFORMATION been confirmed? IF SO, DESCRIBE THE CONFIRMATION. Laboratory results document the expected conditions.	
Block 4 SOURCES OF INFORMATION (check appropri	iate box/es & source number from reference list)
No. available information [] Anecdotal [] Historical process data [] Current process data [] Areal photographs [] Engineering/site drawings [] Unusual Occurrence Report []	Analytical data [] Documentation about data [] Disposal data [] Q.A. data [] Safety analysis report [] D&D report []

Question 6. Estimate the length, width, and depth of the contaminated region. What is the known or estimated volume of the source? If this is an estimated volume, explain carefully how the estimate was derived.
The estimated area of the contaminated region is considered to be the boundary of CPP-61. That area is 25 ft. by 25 ft. The depth could be greater than the 6 ft excavated and remains unknown.
Block 2 How reliable is/are the information source/s?High _X_MedLOW (check one) EXPLAIN THE REASONING BEHIND THIS EVALUATION.
The reports of the excavation report the depth excavated but do not document the depth of contamination.
Has this INFORMATION been confirmed?Yes _X_No (check one) IF SO, DESCRIBE THE CONFIRMATION.
No available information []

Question 7. What is the known or estimated quantity of hazardous substance/constituent at this source? If the quantity is an estimate, explain carefully how the estimate was derived.
Block 1 Answer: The reports document that 400 gallons of 179 ppm PCB containing mineral oil was spilled on the concrete pad and soil. For the purposes of estimating the amount of PCBs that were released, the calculations shown below use an estimated soil volume of 25 ft by 25 ft by 10 ft deep. Soil density is assumed to be 3000 lb/yd^3 . PCB concentrations are the average of those positive concentrations as detected during the soil sampling episode (4.5 ppm).
4.5 ppm PCBs X 235 yd ³ soil X 3000 lbs/yd ³
= 3.2 lbs PCBs
$_{\text{Block 2}}$ How reliable is/are the information source/s?HighMed \underline{X} LOW (check one) Explain the reasoning behind this evaluation.
The soil volume assumption used to calculate the PCBs released to the soil is a qualitative approximation of the affected soil volume.
Hook 3 Has this INFORMATION been confirmed? Yes X No (check one) IF SO, DESCRIBE THE CONFIRMATION.
Block 4 - SOURCES OF INFORMATION (check appropriate box/es & source number from reference list) No available information []

Question 8. Is there evidence that this hazardous substance/constituent is present at the source as it exists today? If so, describe the evidence.	
Block 1 Answer: Yes. The deepest soil samples obtained show concentrations of approximately 5 ppm. These data points indicate that the soil still contains PCBs.	
How reliable is/are the information source/s? X_HighMedLow (check one) EXPLAIN THE REASONING BEHIND THIS EVALUATION. The soil data tables indicate that the deepest soil samples contained PCBs.	
Has this INFORMATION been confirmed? X Yes No (check one) IF SO, DESCRIBE THE CONFIRMATION. The soil data tables indicate that the deepest soil samples contained PCBs.	
Anecdotal [] Historical process data [] Current process data [] Areal photographs [] Engineering/site drawings [] Unusual Occurrence Report [] Summary documents []	Analytical data [] Documentation about data [] Disposal data [] Q.A. data [] Safety analysis report [] Dist report [] Initial assessment [] Well data [] Construction data []

REFERENCES

- 1. Guidelines for the Removal of Contaminated Areas from Concrete Pad.
- 2. Scope of Work for Removal of PCB Contaminated Material Located at the Idaho Chemical Processing Plant.
- 3. Hand Written Notes Regarding the Clean-up of CPP-61*.
- 4. Type Written Report on the Clean-up of PCB Contaminated Soil from Leaking Transformer XFR-8T2-2 (CPP-61)*.
- 5. Final Report for 613 Clean-up (contains laboratory data generated for CPP-61 Clean-up)*.
- 6. Maps Showing Sampling Locations for the Laboratory Data Presented in Reference Number 5.
- 7. August 8, 1986 Memo from S.C. Cooper to Several Parties Regarding PCB Clean-up.
- 8. August 20 Notegram from D. Joan Poland to Pete Hult Regarding Backfilling of Excavation in CPP-61.
- 9. Risk Assessment Information Generated by Wastren Inc.
- 10. Photos Documenting the Soil Clean-up Effort.
- * all references to CPP-61, CPP-718 and 613 refer to the same area.